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Supplemental  
Report on the  
functional and  
physical adequacy  
of Baldwin's three  
existing fire station  
facilities

May 10, 2022

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## **Executive Summary**

Port city Architecture is Northern New England's foremost designer of public safety facilities and was selected by the town, to examine Baldwin's three existing fire stations. As part of an overall comprehensive study of the needs and delivery methods for fire protection in the Town of Baldwin by Neil Courtney, Municipal Fire Operations consultant, Port City Architecture visited and analyzed the physical and functional adequacy of Baldwin's three existing fire stations to deliver fire protection service for the town.

Port City analyzed the three sites to assess the following capabilities at each site:

1. Is the building functional for modern firefighting practices?
2. Is it missing essential functions?
3. Can it accommodate the required apparatus?
4. Is the building structurally sound for an essential facility?
5. Are there major code violations to address?
6. Is it a safe working environment?
7. Is the site adequate?
8. Can it accommodate an expansion or new facility if required?
9. Is there adequate parking and exterior room for apparatus to maneuver?

The current facilities do not meet the needs of modern fire protection, even in a small community such as Baldwin that is served by a cadre of volunteer personnel. Our assessment concluded that all three of Baldwin's fire stations are inadequate in every way to meet the needs of modern firefighting, although North Baldwin could possibly be renovated to serve the community in a very limited volunteer fashion. The buildings are physically worn (two beyond repair), they are functionally inadequate, they violate multiple building safety codes, and they present an unsafe workspace for firefighters. While they are well located geographically for a three-station scenario, each lot is grossly undersized to support a modern station design. Their only function is to poorly house the town's current lineup of apparatus with no option of human habitation.



## **Baldwin Fire Protection facilities overview**

### **OVERVIEW OF BALDWIN**

The Town of Baldwin is located in Cumberland County, Maine and is west of Sebago Lake with New Hampshire to the west. The Town encompasses 36 square miles and has Route 113 as a southern border, which connects Standish to the south and Hiram to the north. According to the US Census of 2010, Baldwin has a year-round population of 1,525 residents.

### **FIRE PROTECTION SERVICES IN BALDWIN**

The Baldwin Fire Department is a volunteer department organized under the authority of the Town. The department has a total roster of 9 including the Fire Chief, the Assistant Chief, and other members of the department. The department is organized into three districts, with each district having its own physical station. District 1 is located on Pequawket Trail (Rte. 113) in East Baldwin, District 2 is on Wiggin Road in North Baldwin, and District 3 is located on the opposite end of Pequawket Trail (Rte. 113) in West Baldwin.

Emergency Medical Services are not provided by the Town of Baldwin. EMS services are provided by the Town of Standish, Maine. Baldwin is covered by Standish District 3, stationed at the Steep Falls barn on Boundary Road in Steep Falls, Maine. Standish Fire/EMS also operates out of their Central Station on Northeast Road in Standish. They operate two front-line ambulances, one spare ambulance, and a fly-car. EMS staff consists of five First Responders, 16 EMT-Bs, seven A-EMTs, and 20 Paramedics, with four full-time Paramedics on duty 24 hours a day, 7 days a week.



## Existing Facility Assessment-West Baldwin

### General Site Description

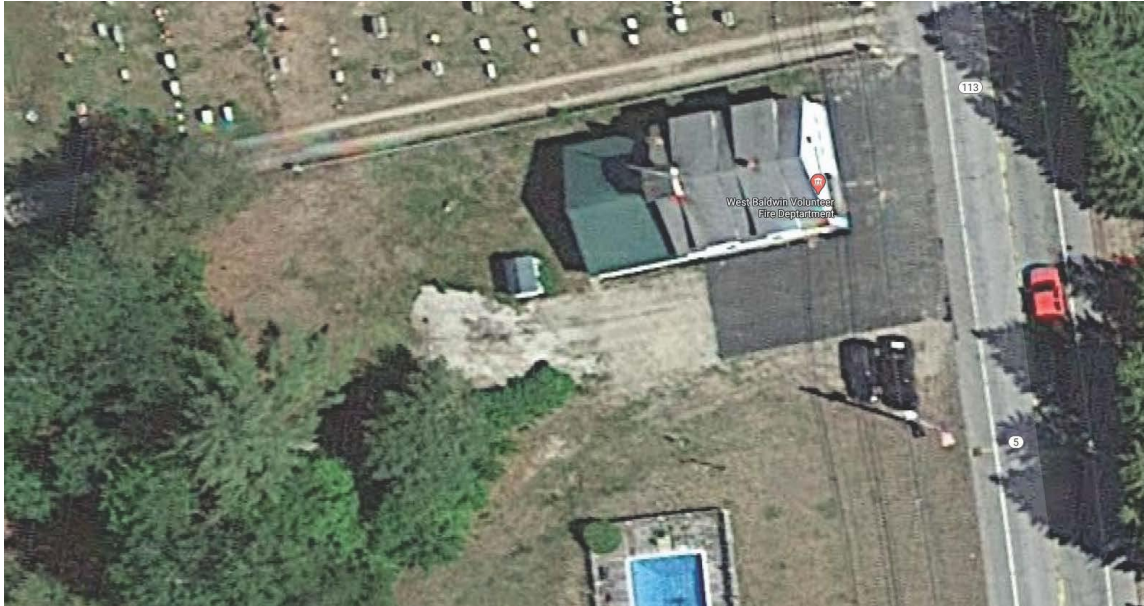
The West Baldwin (District 3) station is located at 956 Pequawket Trail (Route 113) which is the main thoroughfare through the Town. The site is small at approximately 21,000 square feet. Its location is between a single-family residence and a cemetery. This area is zoned R (Rural). In this zone, there is a minimum lot size of 2 acres, and a 200' minimum road frontage requirement. In addition, there is a front setback of 100', side setbacks of 10' and a rear setback of 25'. State of Maine law increases the side setback to the cemetery to 25' for any construction activity including site work. This further restricts the buildable area to an approximate 35' width.

There is a short apron in front of the building of approximately 20' and a paved/gravel parking area to the side for approximately 5-6 cars. Because of the lot shape and setbacks limiting the building width to 35', a new building cannot exceed two bay doors facing the road. There is not enough turning room to face the doors to the side. Given all the requirements, building a new building or an addition is not feasible even if we obtained numerous variances and relief from these ordinances.



*Portion of Map 11(a) showing Lot 51, West Baldwin, Maine*





*Site Plan West Baldwin Fire Station, West Baldwin, Maine*

### **General Building Description**

The Station at West Baldwin is a small two-story building with a 30' x 60' first floor apparatus bay and a 30' x 40' second floor meeting room over the apparatus bays. The original 2-story building in front appears to be around 80 years old. It is a slab-on-grade wood framed building and is in general disrepair. It is roofed with deteriorated asphalt shingles and sided with suspected asbestos siding. The 9'-6" h x 11'-0" w apparatus doors are too small for most modern equipment. The one-story rear section is newer and in better condition. It is vinyl sided with a metal roof. Insulation is poor to non-existent, especially at the exposed 2'-0" high concrete knee wall.



*West Baldwin Fire Station front and rear views, West Baldwin, Maine*



### **Is the building functional for modern firefighting practices?**

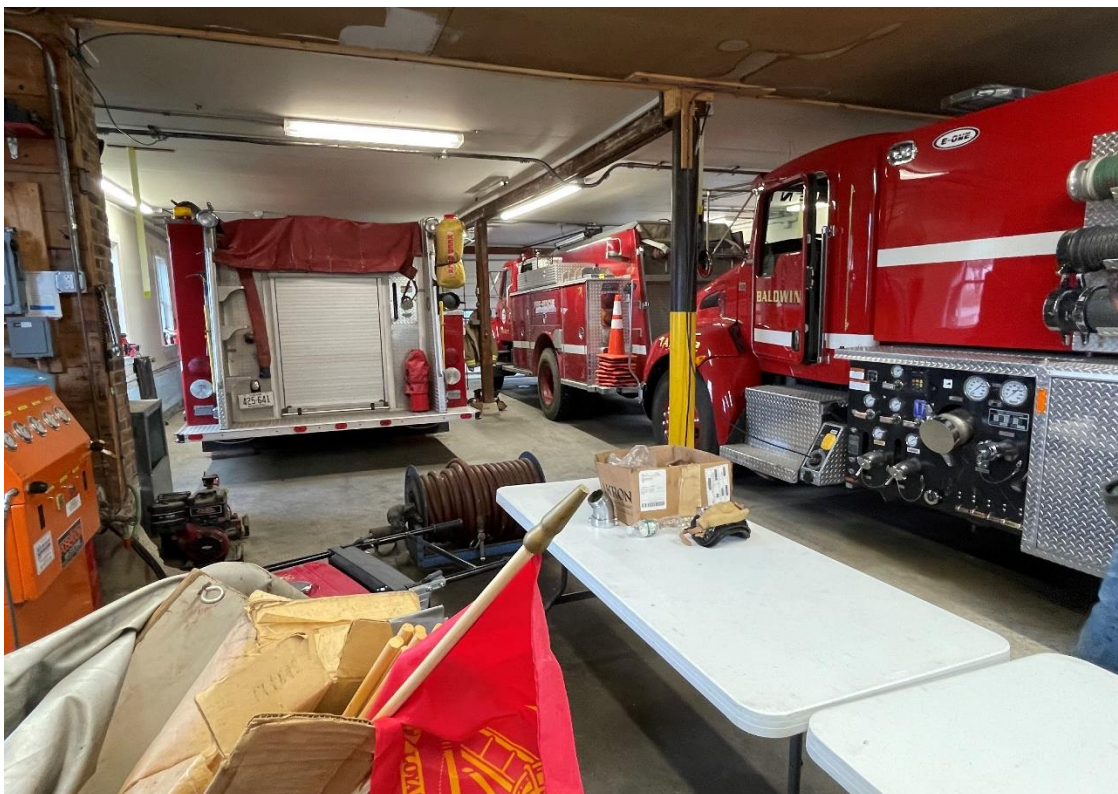
The building is not functional for modern firefighting practices. It is too small. There is no legal space for meeting and/or training, and no space for basic essential functions such as SCBA, decon, offices, day room, etc. The bays are too small for modern equipment and cannot be expanded even with a complete tear down and reconstruction.

### **Is it missing essential functions?**

The building is missing many essential functions even if it were able to continue to operate as a 100% volunteer station which is unlikely as volunteer departments continue to decline. There is no decontamination area, no turn out gear extractor or dryer, no workroom, no storage, no turnout gear locker area, no functional dayroom, no offices, no showers, no generator, and no sleeping rooms to house paid staff if needed. The station is essentially just an undersized garage for apparatus.

### **Can it accommodate the required apparatus?**

The apparatus bay is approximately 30' wide by 60' deep. It currently houses 1 tanker truck and 2 pumpers squeezed in bumper to bumper. The bay doors are 9'-6" high and the bay ceiling is just over 10' clear, providing minimal clearance for the existing apparatus and inadequate height to house a majority of modern equipment.



*West Baldwin Fire Station apparatus bays*

### **Overall condition and structural soundness for an essential facility?**



The West Baldwin station is a wood framed building with a slab-on-grade floor with no floor drains. As stated previously the siding and roofing of the original building need replacement. All interior finishes need refurbishment or replacement. The brick chimney is very deteriorated. Most significantly if the town were to retain the facility for a renovation, a structural analysis would need to be performed to ascertain whether the building meets the “essential facility structural standards of the building code.



*West Baldwin Fire Station generally deteriorated condition*

### **Are there major code violations to address?**

There are several code violations in the building. The most serious is the lack of egress from the second-floor meeting room. There is currently one stair that does not meet the rise/run limitations. It leads into the apparatus bay below without a direct exit to the outside. It appears that a previous exterior exit was removed. It may not be able to be replaced because of the setback to the cemetery. Other code violations include no hood at the stove, no exhaust system for the trucks, inadequate bathroom facilities, deficient emergency lighting and signage, only one exit from the entire building, and probable fire rating and electrical violations.

### **Is it a safe working environment?**

The working environment is not safe. Besides the code violations mentioned above, anyone working in the facility on either floor would suffer prolonged exposure to carcinogenic diesel exhaust and other potential contaminants brought into the station from a fire call. The hose tower does not meet current safety standards. Due to the age of the building, there are most likely other hazardous materials such as lead paint, asbestos, and others.





**Is the site adequate? Can it accommodate an expansion or new facility if required? Is there adequate parking and exterior room for apparatus to maneuver?**

The site is inadequate for a fire station. There is no apron room to maneuver trucks to back into the station without turning on the busy road. The width of the site is completely inadequate especially for any new construction with the state cemetery setback. Most apparatus doors today are 14' x 14'. There is barely room to accommodate two doors if they were enlarged. There is currently parking for four to five cars at the side of the building. That could be expanded to the rear of the site if required.

**Recommendation for West Baldwin:**

The facility at West Baldwin is grossly inadequate to service the fire protection needs of Baldwin into the future. Because the site is so small, any renovation, expansion, or new construction on the site is impossible without the addition of adjacent land. We would recommend that the town dispose of the facility when a better facility is available.



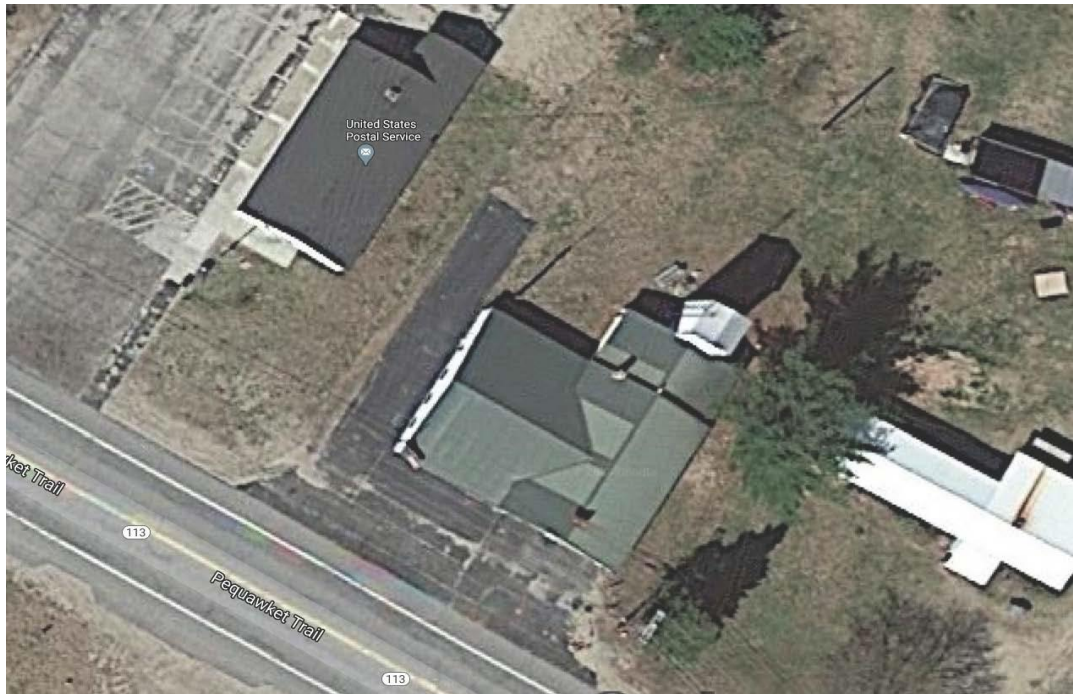
## Existing Facility Assessment-East Baldwin

### General Site Description

The East Baldwin (District 1) is located at 209 Pequawket Trail (Route 113), which is the main thoroughfare through the Town. The information available on the site is conflicting. GIS information shows a site of 0.82 acres. However, tax maps show a much smaller site (see the portion of Tax Map 1a below). It is also unclear if the fire station on this site shares the site with the Post Office Building. It is assumed that due to multiple buildings on this site, the tax map information is most likely correct, and that the GIS information has not been updated. This area is zoned VC (Village Center). In this zone, there is a minimum lot size of 2 acres, and a 200' minimum road frontage requirement. In addition, there is a front setback of 100', side setbacks of 10' and a rear setback of 25'. It also appears that a portion of the rear of the building is over the site lot line. Given all the requirements, building a new building or an addition would require numerous variances and relief from these ordinances.



*Portion of Map 1(b) showing Lot 73, East Baldwin, Maine*



*Site Plan East Baldwin Fire Station, East Baldwin, Maine*

**General Building Description**

The Station at East Baldwin is a small one-story building of approximately 2,300sf. It contains a two door 25' x 38' apparatus bay with a 14' x 25' low ceiling apparatus extension on the rear, and a 25' x 38' meeting room beside the apparatus bays. The building appears to be around 50 years old. It is a slab-on-grade wood framed building and is in relatively good condition with a metal roof and vinyl siding. The 11'-0" w x 12'-0" h apparatus doors are on the smaller than today's standards but should still accommodate most equipment. Insulation is poor to fair. The app bay exposed CMU knee walls are uninsulated and appear to be ungrouted.



*East Baldwin Fire Station, East Baldwin, Maine*



### **Is the building functional for modern firefighting practices?**

The building marginally functional for modern firefighting practices. While it contains a sufficiently sized training room which could also function as a day room, it lacks many other features of a modern fire station. There is no space for basic essential functions such as SCBA, decon, offices, storage, etc.

### **Is it missing essential functions?**

The building is missing many essential functions even if it were able to continue to operate as a 100% volunteer station which is unlikely as volunteer departments continue to decline. There is no decontamination area, no workroom, no storage, no turnout gear locker area, no offices, no showers, no generator, and no sleeping rooms to house paid staff if needed. Similar to West Baldwin, the station is essentially just a garage for apparatus.



*East Baldwin Fire Station, missing functional areas crammed into app bay*



*East Baldwin Fire Station, dayroom*

### **Can it accommodate the required apparatus?**

The apparatus bay is approximately 28' wide by 52' deep including the low ceiling area in the rear. It currently houses 1 tanker truck, 1 pumper truck, and 1 forestry truck squeezed in bumper to bumper. There is very little room to walk around the equipment. The 11' x 12' bay doors are marginally adequate, as is the front bay ceiling height. The width and depth, however, are inadequate for even the existing equipment.



*East Baldwin Fire Station apparatus bays*

### **Overall condition and structural soundness for an essential facility?**

The East Baldwin station is a wood framed building with a slab-on-grade floor with no floor drains. Most significantly if the town were to retain the facility for a renovation, a structural analysis would need to be performed to ascertain whether the building meets the “essential facility” structural standards of the building code. The ungrouted block foundation at the apparatus bay would most likely need to be reinforced.

### **Are there major code violations to address?**

The only apparent code violations include no hood at the stove, no exhaust system for the trucks, and inadequate bathroom facilities. There may be a safety code problem with the hose tower behind the app bay, and there are possible emergency lighting and signage, fire rating and electrical violations.

### **Is it a safe working environment?**

The major problem with personnel safety is the air separation between the meeting room and the app bays. Anyone working in the facility could suffer prolonged exposure to carcinogenic diesel exhaust and other potential contaminants brought into the station from a fire call. There is no pressure differential to keep these contaminants from entering the living areas. There is no vehicle exhaust system, and personal gear is stored in the bays collecting contaminated particles. Also, the hose tower does not meet current safety standards.

### **Is the site adequate? Can it accommodate an expansion or new facility if required? Is there adequate parking and exterior room for apparatus to maneuver?**

The worst problem with the East Baldwin station is the size of the site. It is inadequate for a fire station. There is no apron room to maneuver trucks to back into the station without turning around on the very busy road. It is completely inadequate for either a renovation or new construction. There is currently parking for four to five cars at the front and side of the building with no room for additional spaces. The department currently does not use the meeting room because there is no off-street parking. Some time ago multiple personal vehicles were sideswiped by a driver on Route 113 when they were parked along the edge of the road for a training meeting.

### **Recommendation for East Baldwin:**

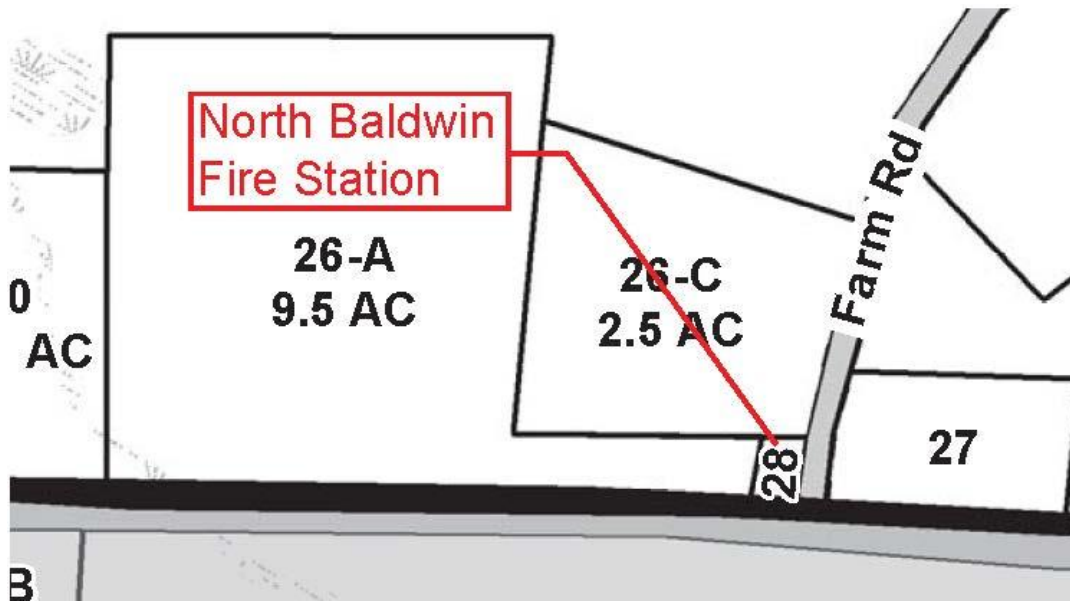
The facility at East Baldwin is also inadequate to service the fire protection needs of Baldwin into the future. Because the site is so small, any renovation, expansion, or new construction on the site is impossible without the addition of adjacent land. We would recommend that the town dispose of the facility when a better facility is available.



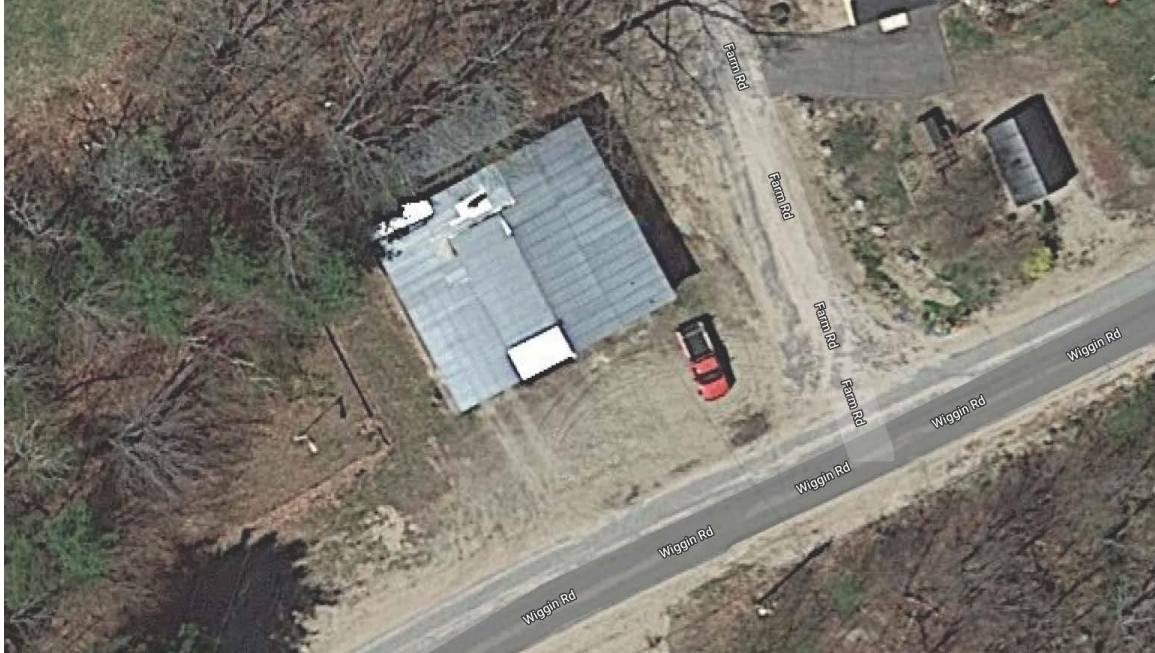
# Existing Facility Assessment-North Baldwin

## General Site Description

The North Baldwin station(District 2) is located at the corner of Wiggin Road and Farm Road. The site is currently leased by the town. The site is extremely small at approximately 6,500 square feet. This area is zoned R (Rural). In this zone, there is a minimum lot size of 2 acres, and a 200' minimum road frontage requirement. In addition, there is a front setback of 100', side setbacks of 10' and a rear setback of 25'. Given all the requirements, building a new building or an addition would require numerous variances and relief from these ordinances.



*Portion of Map 9 showing Lot 28, Baldwin, Maine*



*Site Plan North Baldwin Fire Rescue Station, Baldwin, Maine*

### **General Building Description**

The Station at North Baldwin is a small two-story building of approximately 3,500sf. The first floor consists of two 18' x 46' apparatus bays on each end with a 20' x 34' low ceiling apparatus bay in the middle and a 20' x 12' workroom behind. The 20' x 46' second floor is located above the low ceiling bays in the middle and contains a meeting room with a bunkroom and toilet behind. The building appears to be around 60 years old. It is a slab-on-grade wood framed building and is in very poor condition with a metal roof and peeling vinyl siding. It also has a cold storage shed behind the building.



*North Baldwin Fire Station, East Baldwin, Maine*





### **Is the building functional for modern firefighting practices?**

The building is currently not functional for modern firefighting practices. It could possibly be adapted as a small volunteer substation with a lot of work. There is currently no legal space for meeting and/or training, and no space for basic essential functions such as SCBA, decon, offices, day room, etc. The end bays are the largest single bays in Baldwin at 18' x 46' each with 12' x 12' doors. It also has the largest (gravel) apron of the three stations and is located on a less traveled road. Both the first and second floors of the center section would have to be extensively remodeled to become usable and safe.

### **Is it missing essential functions?**

The building is missing many essential functions even if it were able to continue to operate as a 100% volunteer station which is unlikely as volunteer departments continue to decline. There is no decontamination area, no useable meeting/training room, no storage, no turnout gear locker area, no functional dayroom, no offices, no showers, no generator, and no sleeping rooms to house paid staff if needed. Like the east and west stations, North station is just a storage garage for apparatus.

### **Can it accommodate the required apparatus?**

The two end apparatus bay are approximately 18' wide by 46' deep each. They currently house 1 engine and 1 forestry truck. The bay doors are 12' x 12' and the bay ceiling is just over 13' clear, providing reasonable clearance for the existing apparatus and potential future apparatus. The low ceiling center bays contain a foam trailer and other stored items. The 8'-8" h x 10' w doors could accommodate a pickup or trailer but would probably be better if remodeled into working space with a stair to the outside from the second floor.



*North Baldwin Fire Station apparatus bays*

### **Overall condition and structural soundness for an essential facility?**



The North Baldwin station is a wood framed building with a slab-on-grade floor with no floor drains. As stated previously the building is in poor condition. The vinyl siding is peeling in many places and needs replacement. Most interior finishes need refurbishment or replacement. There is a noticeable sag to the center beams over the small center overhead doors, and the second floor looks to be sagging as well. It is partially suspended by two metal rods from the ridge beam, and the whole second floor is structurally suspect. If the town were to retain the facility for a renovation, a structural analysis would need to be performed to ascertain whether the building meets the “essential facility structural standards of the building code.



*North Baldwin Fire Station generally deteriorated condition*

### **Are there major code violations to address?**

There are several code violations in the building. The most serious is the lack of egress from the second-floor meeting room. There is currently one stair that does not meet the rise/run limitations. It leads into the center of the apparatus bay below without a direct exit to the outside. There is a wood exterior stair on the rear which would need to be enclosed. Other code violations include no exhaust system for the trucks, inadequate bathroom facilities, no fire separations between the living areas and the bays, deficient emergency lighting and signage, and probable electrical violations.

**Is it a safe working environment?**

The working environment is not safe. Besides the code violations mentioned above, anyone working in the facility on either floor would suffer prolonged exposure to carcinogenic diesel exhaust and other potential contaminants brought into the station from a fire call. There are most likely other hazardous materials such as lead paint, asbestos, and other materials.

**Is the site adequate? Can it accommodate an expansion or new facility if required? Is there adequate parking and exterior room for apparatus to maneuver?**

The site is marginally adequate for a small fire substation. Although the building could probably not be expanded, it might be able to be remodeled into a small volunteer station with no sleeping quarters. There is currently parking for six to eight cars at the sides of the building. There is also a current practice of parking on the neighboring lot across the street.

**Recommendation for North Baldwin:**

The facility at North Baldwin could possibly service the fire protection needs of Baldwin in a very limited fashion. Because the site is so small, any expansion or new construction on the site is impossible without the addition of adjacent land. We would recommend a study before the town provided any renovations in order to establish a cost/benefit report.

END

